Idaho National Engineering and Environmental Laboratory

Bosch/Ford Injector Testing

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Injector Test

- *A concern exists that CNG made from LNG, or vaporized LNG without lubrication derived from compressor oil could cause premature failure of injectors on some vehicles.*

- *This injector test is intended to identify and quantity the validity of this concern/problem.*

Vehicle

- *Ford van was selected for testing*
- *New vehicle was procured*
- *Van was filled once at the factory with some CNG (standard process)*
- *Second filling was from L/CNG fueling station (pump based) as part of the injector test*

Test Plan

- Bosch supplied 4 sets of injectors
  - 3 pre-measured and marked sets
  - 1 set of unmarked injectors (spares)
- Each set will be rotated installed in the vehicle, periodically removed, evaluated, and retested
- Test started January 2002

Evaluation Cycle

Mileage	Injector set	Status
0 - 5,000	#1	Complete
5,000-10,000	#2	Complete
10,000 - 15,000	#3	Complete
15,000 - 25,000	#1	1/30/03
25,000 - 35,000	#2	
35,000 - 45,000	#1	
45,000 - 55,000	#2	
55,000 - (death)	#1	

Status

- *Injector #1 will be replaced this week*
- *Injector #2 will be reinstalled*
- *Injector #1 will be inspected*
- *Between 100 and 150 miles per day being placed on the vehicle*
- *Fueling station being down has impacted fueling*
- *We expect some initial results around the end of this year*